IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A synchronous detector that detects timing of scanning by an optical scanner, the optical scanner having a light source that emits a light beam, a deflecting unit that deflects the light beam, a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned, comprising:

a photoreceiver; and

a synchronous optical element that ~~focus~~ focuses the light beam deflected by the deflecting unit onto the photoreceiver, wherein the synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the synchronous optical element in ~~the~~ a main scanning direction of the synchronous optical element

wherein

the light beam deflected by the deflecting unit onto the surface to be scanned and the light beam deflected by the deflecting unit onto the photoreceiver are in a same plane.

Claim 2 (Currently Amended): ~~The synchronous detector according to claim 1~~

A synchronous detector that detects timing of scanning by an optical scanner, the optical scanner has a light source that emits a light beam, a deflecting unit that deflects the light beam, a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned, comprising:

a synchronous optical element that focus the light beam deflected by the deflecting unit onto a photoreceiver, wherein the synchronous optical element satisfies a relationship

fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the synchronous optical element in a main scanning direction of the synchronous optical element, wherein

the synchronous detector comprises a plurality of the synchronous optical elements and a plurality of [[the]] photoreceivers~~, wherein~~;

the synchronous optical elements have negative power in the main scanning direction of the synchronous optical element.

Claim 3 (Original): The synchronous detector according to claim 2, wherein a plurality of laser beams travel toward the same synchronous detector, and the synchronous optical elements are arranged so as to focus principal rays of the light beams to a single point in a secondary scanning direction.

Claim 4 (Currently Amended): ~~The synchronous detector according to claim 1~~

A synchronous detector that detects timing of scanning by an optical scanner, the optical scanner has a light source that emits a light beam, a deflecting unit that deflects the light beam, a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned, comprising:

a photoreceiver; and

a synchronous optical element that focuses the light beam deflected by the deflecting unit onto the photoreceiver, wherein the synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the

synchronous optical element in a main scanning direction of the synchronous optical element, wherein

the synchronous optical element is a single lens that is designed such that one surface thereof is a cylindrical surface that is concave in the main scanning direction, and the other surface thereof is a rotationally symmetric surface.

Claim 5 (Currently Amended): An optical scanner comprising:

a light source that emits a light beam;

a deflecting unit that deflects the light beam;

a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned; and

a synchronous detector that detects timing of scanning by an optical scanner, the synchronous detector including

a photoreceiver; and

a synchronous optical element that focus the light beam deflected by the deflecting unit onto the photoreceiver, wherein the synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the synchronous optical element in ~~the~~ a main scanning direction of the synchronous optical element,

wherein

the light beam deflected by the deflecting unit onto the surface to be scanned and the light beam deflected by the deflecting unit onto the photoreceiver are in a same plane.

Claim 6 (Currently Amended): The optical scanner according to claim 5, wherein

~~the light sources are provided in plurality~~ a plurality of light sources is provided, each of the light sources emits a light beam,

~~the deflecting units are provided in plurality~~ a plurality of deflecting units is provided, each of the deflecting units deflects a corresponding one of the light ~~beam~~ beams, and

~~the scanning optical elements are provided in plurality~~ a plurality of scanning optical elements is provided, each of the scanning optical elements focuses the light beam deflected by a corresponding one of the deflecting units onto a corresponding one of a ~~surface~~ plurality of surfaces to be scanned.

Claim 7 (Original): The optical scanner according to claim 6, wherein

the optical scanner is a multi-beam optical scanner in which a plurality of light beams pass through the respective optical surfaces of scanning the optical element having a form in which identical optical surfaces are formed on top of one another in a plurality of tiers.

Claim 8 (Currently Amended): ~~The optical scanner according to claim 5, wherein~~ An optical scanner comprising:

a light source that emits a light beam;

a deflecting unit that deflects the light beam;

a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned; and

a synchronous detector that detects timing of scanning by an optical scanner, the synchronous detector including

~~the synchronous detector comprises~~

a photoreceiver;

a synchronous optical element that focus the light beam deflected by the deflecting unit onto the photoreceiver, wherein the synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the synchronous optical element in a main scanning direction of the synchronous optical element; and

a plurality of the synchronous optical elements and a plurality of [[the]] photoreceivers, wherein the synchronous optical elements have negative power in the main scanning direction.

Claim 9 (Original): The optical scanner according to claim 8, wherein a plurality of laser beams travel toward the same synchronous detector, and the synchronous optical elements are arranged so as to focus principal rays of the light beams to a single point in a secondary scanning direction.

Claim 10 (Currently Amended): ~~The optical scanner according to claim 5,~~ An optical scanner comprising:

a light source that emits a light beam;

a deflecting unit that deflects the light beam;

a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned; and

a synchronous detector that detects timing of scanning by an optical scanner, the synchronous detector including

a photoreceiver; and

a synchronous optical element that focus the light beam deflected by the deflecting unit onto the photoreceiver, wherein the synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the synchronous optical element in a main scanning direction of the synchronous optical element,

wherein

the synchronous optical element is a single lens that is designed such that one surface thereof is a cylindrical surface that is concave in the main scanning direction of the synchronous optical element, and the other surface thereof is a rotationally symmetric surface.

Claim 11 (Currently Amended): An image forming apparatus comprising a photoreceptor, an optical scanner that optically scans a surface of the photoreceptor, and a synchronous detector that detects timing of scanning of the photoreceptor by the optical scanner, wherein

the optical scanner includes

a light source that emits a light beam;

a deflecting unit that deflects the light beam; and

a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned, and the synchronous detector includes

a photoreceiver; and

a synchronous optical element that focus the light beam deflected by the deflecting unit onto the photoreceiver, wherein the synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning

optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the synchronous optical element in ~~the~~ a main scanning direction of the synchronous optical element,

wherein

the light beam deflected by the deflecting unit onto the surface to be scanned and the light beam deflected by the deflecting unit onto the photoreceiver are in a same plane.

Claim 12 (Currently Amended): ~~The image forming apparatus according to claim 11,~~ An image forming apparatus comprising a photoreceptor, an optical scanner that optically scans a surface of the photoreceptor, and a synchronous detector that detects timing of scanning of the photoreceptor by the optical scanner, wherein

the optical scanner includes

a light source that emits a light beam;

a deflecting unit that deflects the light beam; and

a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned, and the synchronous detector includes

a plurality of photoreceivers; and

a plurality of synchronous optical elements

wherein

the synchronous optical elements focus the light beam deflected by the deflecting unit onto a photoreceiver, wherein a synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical

element, and fd is a composite focal length of the synchronous optical element in a main scanning direction of the synchronous optical element, and

the synchronous detector comprises a plurality of the synchronous optical elements and a plurality of the photoreceivers, wherein the synchronous optical elements have negative power in the main scanning direction.

Claim 13 (Original): The image forming apparatus according to claim 12, wherein a plurality of laser beams travel toward the same synchronous detector, and the synchronous optical elements are arranged so as to focus principal rays of the light beams to a single point in a secondary scanning direction.

Claim 14 (Currently Amended): ~~The image forming apparatus according to claim 11,~~ An image forming apparatus comprising a photoreceptor, an optical scanner that optically scans a surface of the photoreceptor, and a synchronous detector that detects timing of scanning of the photoreceptor by the optical scanner, wherein

the optical scanner includes

a light source that emits a light beam;

a deflecting unit that deflects the light beam; and

a scanning optical element that focuses the light beam deflected by the deflecting unit onto a surface to be scanned, and the synchronous detector includes

a photoreceiver; and

a synchronous optical element that focus the light beam deflected by the deflecting unit onto the photoreceiver, wherein

the synchronous optical element satisfies a relationship fm<fd, where fm is a composite focal length of the scanning optical element in a main scanning direction of the scanning optical element, and fd is a composite focal length of the synchronous optical element in a main scanning direction of the synchronous optical element; and

~~wherein~~

the synchronous optical element is a single lens that is designed such that one surface thereof is a cylindrical surface that is concave in the main scanning direction of the synchronous optical element, and the other surface thereof is a rotationally symmetric surface.